Student Feedback from the January 2010 SPICE Class in Pasadena, CA

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Organized by Feedback Form (by Student)

At the conclusion of the January 2010 SPICE training class the instructors solicited feedback via a form that contained a number of suggested topics, but that also solicited freeform input. Twelve students provided written comments at the end of the class; their comments are summarized here.

The NAIF Team realizes that students tend to write more positive than negative comments, and so we realize that the generally positive sentiments received on the feedback forms, summarized below, are not fully representative of the entire collection of feelings about the class, or about SPICE in general. We continue to solicit comments about aspects of SPICE, and SPICE training, which need improvement.

Student 1

1. Kernels: Would like a little more detail about the three kinds of kernels (generic, mission ops, PDS archived) available from NAIF. Including how best to organize these.
2. Tutorials: Regarding IDs for frames and objects, consider constructing a graphic representation of these, for instance "on the number line, as is done for the electromagnetic spectrum." (Small example was provided.)

Student 2
1. Interfaces: Adding a GUI interface to SPICE would be great.
2. Complexity: There is most definitely a learning curve (in learning how to use SPICE), but it is worth it.
3. Code documentation is very good.
4. "Required Reading" reference documents are very good.
5. Access to SPICE software: A+
6. Access to generic kernels: A+ (However, it's not yet clear if updates made to mission generic kernels will be made.)
7. Access to mission ops kernels: Would be nice if "unsupported missions" could post their kernels.
8. Hands-on lessons and tutorials: both good
9. Training (the class itself): "Was exactly what I hoped for."
10. International cooperation: "SPICE is brilliant and I hope it continues to develop."
11. General comments. "Perhaps should consider using and/or teaching SPICE in university classes. Many of the applications of SPICE are core concepts in aerospace courses; having students and professors using SPICE might help foster support."

Student 3
1. Interfaces to SPICE: "Good info, but a little less time would have been fine."
2. Code documentation: Seems useful - liked the examples
3. Reference documents ("Required Reading): Confusing… need a better index with what is available.
4. Meta-data for kernel files: "Great – I plan to go through some instrument kernels when I get back to work."
5. Lessons: "Good, except for the one where we had to click through the documentation. Anyone that has programmed knows how to go through documentation to find and learn how to use routines."
6. Training: Liked the class overall. It is pretty intensive, so can't soak up everything, but I'm more knowledgeable about SPICE.

Student 4
1. Complexity: As a beginner it is a bit difficult to understand all, but I did obtain a concrete understanding of SCLK.
2. Code documentation: very clear and useful
3. Reference documentation: very useful
4. Access to SPICE software: easy to install and access
5. Lessons: very useful and helpful
6. Training classes: "I was fortunate to be in this training class; learned so much."
7. General: "It was excellent training and all presentations were really effective. The materials presented are very useful; I will definitely make use of them later on."

Student 5
1. I am new to SPICE; this training represents my first exposure to SPICE. The class was excellent! I liked the balance between the lectures and programming lessons.
2. While I would have liked more time for programming during the class, a longer class would have been difficult to attend, so the class length is probably just right.
3. The pace of the class was right for me. I generally finished the coding assignments (or almost did) during the allotted times.
4. The lectures were interesting and did a great job in explaining complex topics and answering questions from the audience.
5. I will definitely recommend this class to my colleagues; I look forward to using SPICE in the future.
6. I highly support the addition (completion) of a star catalog to SPICE!

Student 6
1. Overall the class was great. I have two suggestions.
2. Polish the pre-class *.pdf that is emailed out. In my panic before my flight it was a little hard to parse in a hurry.
3. Briefly discuss lessons after their conclusion. The written solutions are great but a brief verbal discussion would be useful.

Student 7
1. Interfaces: very consistent; easily understood.
2. Complexity of SPICE: Very complex… there's a lot of information to ingest.
3. Code documentation: extensive through multiple sources.
4. Access to SPICE software: Highly accessible; I hope it remains this way.
5. Programming lessons: extremely helpful. Good for beginners (myself) and intermediates.
6. Tutorials: I will be going through more (of them) in the near future.
7. Training: I would be interested in taking an advanced class.

Student 8
1. Would love to use the Python interface to SPICE (once it is available).
2. General comments: I now feel a lot more comfortable using the SPICE tools. The workshop topics were clear and concise. I was able to execute some of the tools with no major problems.

Student 9
1. We use SPICE everywhere on MRO for observation planning.
2. Access to SPICE software: Thanks for keeping it ITAR-free.
3. Tutorials: very good.
4. Training (the class): I enjoyed the class and learned a lot.
5. Am interested in Octave-SPICE integration. (Octave is a freeware "language" very similar to MATLAB.)

Student 10
1. As a beginner with SPICE I found the class very useful.
2. I suggest you increase the emphasis on the hands-on programming lessons; I learned the most by trying to write some code and asking questions about it.

Student 11

General: Thank you very much for including me in your SPICE class. I got what I was looking for out of it.

1. The sessions explaining how to look things up in the documentation were especially useful to me. SPICE can be overwhelming without user's guides, so spending time on this was very helpful.
2. It was mentioned that more work would be put into the Geometry Finder in the future. How would one keep abreast of the new capabilities?
3. I thought the lessons covered in the class were at the perfect level. Not so hard to cause frustration, but hard enough to get a feel for how the code works.
4. The only suggestion I have for future classes is when you are running behind schedule. I realize the wireless connectivity was beyond your control and was mostly responsible for holding up class sessions. Rather than rushing through the material to make sure everything was covered, however, I would have preferred that some of the material been tossed out and have the class proceed at a more

steady pace. While rushing through the material, all that was really happening is that the presenter was reading the viewgraphs. We could have done that ourselves later. I found us moving through the session so quickly that I was unable to absorb or comprehend much of what we were being taught.

Student 12
1. Overall the class was very good. Has helped me get comfortable with SPICE-based code I inherited. Especially liked the coding lessons. I was quite satisfied and will encourage others to attend future classes.
2. In the xform task of the remote sensing lesson, nothing is said about the need to convert results from radians to degrees; consider adding that.
3. The "derived_quantities" tutorial was presented after the "xform" task mentioned above. But it contained descriptions of code needed for the xform task. Consider presenting this tutorial before the "xform" task of the remote sensing lesson.
4. I liked the subpts task of the remote sensing lesson, including the fact that you did not provide a step-by-step approach for it… that would have made it too simple. But still think too much time was allocated to this task.
5. In the fovint task of the remote sensing lesson I had the same issue as to output units; I did not understand that conversion to degrees was needed. Consider adding that to the task instructions.